

## 0.a. Goal

Goal 10: Reduce inequality within and among countries

## 0.b. Target

Target 10.2: By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

## 0.c. Indicator

Indicator 10.2.1: Proportion of people living below 50 per cent of median income, by sex, age and persons with disabilities

## 0.e. Metadata update

2021-08-01

## 0.f. Related indicators

Indicator 1.1.1: Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural)

Indicator 1.2.1: Proportion of population living below the national poverty line, by sex and age

Indicator 10.1.1: Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population and the total population.

## 0.g. International organisations(s) responsible for global monitoring

World Bank (WB)

## 1.a. Organisation

World Bank (WB)

## 2.a. Definition and concepts

### Definition:

The proportion of people living below 50 percent of median income (or consumption) is the share (%) of a country's population living on less than half of the consumption/income level of the median of the national income/consumption distribution.

## Concepts:

The indicator is measured using per capita welfare measure of consumption or income. The indicator is calculated by estimating the share of the population in a country living on less than 50% of median of the national distribution of income or consumption, as estimated from survey data.

Per capita income or consumption is estimated using total household income or consumption divided by the total household size. Total disposable income or total consumption from both market and non-market sources is the desired welfare vector used.

The estimation relies on the same harmonized welfare vectors (distributions) that are used for 10.1.1 and 1.1.1. Using the same data and closely related methodologies ensures internal consistency across these closely related indicators. The data is available through PovcalNet, the World Bank's online tool for reporting global poverty and inequality numbers. For details on concepts and standards, refer to documentation available on the PovcalNet website.

The methodology entails measuring the share of people living below 50% of national median. A threshold set at 50% of the median of the income or consumption is used to derive a headcount rate, similar to how monetary poverty is typically measured. The national median is readily available from the distributional data in PovcalNet. The measurement follows a two-step process of first estimating half of the national median income (or consumption) and then the share of people living below this relative threshold.

The indicator uses the same data on household income and consumption that is used for monitoring SDG indicators 1.1.1 and 10.1.1, which have been classified as Tier 1 indicators. The methodology and data are similar to that used in measuring international poverty, which has been tested and vetted over many years, including for the purpose of monitoring MDG 1. It is also closely related to a large literature of relative poverty measurement.

## 2.b. Unit of measure

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The unit of measure is the proportion of people.

## 2.c. Classifications

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Not relevant.

## 3.a. Data sources

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Data of income or consumption comes from nationally representative household surveys or assessments of income or consumption distributions, typically carried out and overseen by National Statistical Offices (NSOs). After some quality control and harmonization the data is available through PovcalNet, the World Bank online tool for global poverty and inequality measurement.

## 3.b. Data collection method

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NSOs typically lead survey efforts for data collection at the country level. Within the World Bank, the Global Poverty Working Group (GPWG) oversees the collection, validation of income and consumption survey data used in estimation. GPWG archives the datasets obtained from NSOs and harmonizes them, applying common methodologies to ensure comparability, before estimation.

### **3.c. Data collection calendar**

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Source collection is ongoing by the Global Poverty Working Group of the World Bank.

### **3.d. Data release calendar**

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The World Bank Group is committed to updating the poverty data every year.

### **3.e. Data providers**

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The World Bank typically receives data from National Statistical Offices (NSOs) directly. In other cases it uses NSO data received indirectly. For example, it receives data from Eurostat and from LIS (Luxemburg Income Study), who provide the World Bank NSO data they have received / harmonized. The Universidad Nacional de La Plata, Argentina and the World Bank jointly maintain the SEDLAC (Socio-Economic Database for Latin American and Caribbean) database that includes harmonized statistics on poverty and other distributional and social variables from 24 Latin American and Caribbean countries, based on microdata from household surveys conducted by NSOs.

Data is obtained through country specific programs, including technical assistance programs and joint analytical and capacity building activities. The World Bank has relationships with NSOs on work programs involving statistical systems and data analysis. Poverty economists from the World Bank typically engage with NSOs broadly on poverty measurement and analysis as part of technical assistance activities.

### **3.f. Data compilers**

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Within the World Bank, the Global Poverty Working Group (GPWG) is in charge of the collection and validation of income and consumption survey data used in estimation. GPWG archives the datasets obtained from NSOs and then harmonizes them, applying common methodologies. The objective of the GPWG is to ensure that poverty and inequality data generated, curated, and disseminated by the World Bank are up to date, meet high-quality standards, and are well documented and consistent across dissemination channels. Members of GPWG generate and update the estimates for the proportion of population below 50 percent of national median, using raw data typically provided by country governments. The raw data are obtained by poverty economists through their contacts in the NSOs, and checked for quality before being submitted for further analysis. The raw data can be unit-record survey data, or grouped data, depending on the agreements with the country governments. In most cases, the welfare aggregate, the essential element for estimation, is generated by the country governments. Sometimes, the World Bank has to construct the welfare aggregate or adjust the aggregate provided by the country for the purpose of harmonization and comparability.

## **4.a. Rationale**

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Addressing social inclusion and inequality is important on the global development agenda as well as on the national development agenda of many countries. The share of the population living below 50% of median national income is a measure that is useful for monitoring the level and trends in social inclusion, relative poverty and inequality within a country.

The share of people living below 50% of the median is an indicator of relative poverty and inequality of the income distribution within a country. This indicator and similar relative measures are commonly used for poverty measurement in rich countries (including Organization for Economic Cooperation and Development's (OECD) poverty indicators and Eurostat's indicators of risk of poverty or social exclusion) and are increasingly also used as a complementary measure of inequality and poverty in low- and middle- income countries.

## 4.b. Comment and limitations

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Like for poverty rates (SDG 1.1.1) and growth in household incomes across the distribution (SDG 10.1.1), estimates are based on income or consumption data collected in household surveys, led by NSOs. Many of the same data quality issues applying to those indicators apply here, some of which are summarized below:

Data is collected with great heterogeneity and ex-post harmonization will always face limitations. Similar surveys may not be strictly comparable because of differences in timing, sampling frames, or the quality and training of enumerators. Comparisons of countries at different levels of development also pose problems because of differences in the relative importance of the consumption of nonmarket goods. The local market value of all consumption in kind (including own production, particularly important in underdeveloped rural economies) should be included in total consumption expenditure, but in practice are often not. Most survey data now include valuations for consumption or income from own production, but valuation methods vary.

Estimating the share of people living below 50% of the national median is less sensitive to comparability limitations than estimates of international poverty. The relative nature of the threshold (a function of the distribution median) means that it is not sensitive price differences across time and countries. Appropriately adjusting for price differences is a major challenger in absolute poverty measurement.

## 4.c. Method of computation

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The indicator is measured using the national distribution per capita measure of consumption or income, as derived from surveys. The indicator is calculated by estimating the share (in percent) of the population living on less than 50% of median of the national distribution of income or consumption. The median is estimate from the same distribution as the indicator is estimated from, thus the 50% of median threshold will vary over time.

Per capita income or consumption is estimated using total household income or consumption divided by the total household size.

## 4.f. Treatment of missing values (i) at country level and (ii) at regional level

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### • At country level

No gap filling is done to report national numbers.

- **At regional and global levels**

This is a country specific indicator and no aggregation is currently planned. Aggregation could be carried out in the same as for SDG 1.1.1, with alignment of estimates to reference years. This requires assumption of distribution neutral growth between survey estimates and reference years.

## 4.g. Regional aggregations

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This is a country specific indicator and no aggregation is currently planned. Aggregation could be carried out in the same as for SDG 1.1.1, with alignment of estimates to reference years.

## 4.h. Methods and guidance available to countries for the compilation of the data at the national level

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Guidance is the same as for collection of income and consumption of poverty data, for which the World Bank has published several hand books and manuals. A useful reference is also the “Report of the World Bank on poverty statistics” submitted to the Forty-ninth session of the UN Statistical Commission.

## 4.j. Quality assurance

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Within the World Bank, the Global Poverty Working Group (GPWG) is in charge of the collection, validation of income and consumption survey data used in estimation. GPWG archives the datasets obtained from NSOs and then harmonizes them, applying common methodologies. The objective of the GPWG is to ensure that poverty and inequality data generated, curated, and disseminated by the World Bank are up to date, meet high-quality standards, and are well documented and consistent across dissemination channels. Members of GPWG generate and update the estimates for the proportion of population below the international poverty line using raw data typically provided by country governments. World Bank country staff works in close collaboration with national statistical authorities on the data collection and dissemination process.

## 5. Data availability and disaggregation

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### **Data availability:**

As of 2021, data is readily available on 168 countries, and the methodology is building on well-established practice used in international poverty measurement tested over many years. Estimates for the particular indicator have now been tested and validated and data are ready to be reported for all countries for which we report data for 1.1.1.

### **Time series:**

The database ranges from 1978 to 2019 and is updated up to twice a year.

### **Disaggregation:**

The World Bank is working to improve the methodology and disaggregation of poverty and inequality measures by subgroups. Until methodological issues are resolved, disaggregation below the country level will not be addressed.

## 6. Comparability/deviation from international standards

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### Sources of discrepancies:

The harmonization of welfare vectors to per capita standards can lead to differences with nationally estimated welfare vectors which may use other adjustments of the welfare vector.

## 7. References and Documentation

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PovcalNet, World Bank - <http://iresearch.worldbank.org/PovcalNet>. The World Bank's online tool for analysis of income and consumption data.

UN. 2018. Report of the World Bank on poverty statistics. Statistical Commission Statistical Commission

Forty-ninth session.

<https://unstats.un.org/unsd/statcom/49th-session/documents/2018-23-Poverty-E.pdf>

For a comprehensive link to related background papers, working papers and journal articles see: <http://iresearch.worldbank.org/PovcalNet/index.htm?0,4>

The following two documents provide key information on

- A Measured Approach to Ending Poverty and Boosting Shared Prosperity: Concepts, Data, and the Twin Goals. (<http://www.worldbank.org/en/research/publication/a-measured-approach-to-ending-povertyand-boosting-shared-prosperity>)
- Ferreira, Francisco H. G.; Chen, Shaohua; Dabalen, Andrew L.; Dikhanov, Yuri M.; Hamadeh, Nada; Jolliffe, Dean Mitchell; Narayan, Ambar; Prydz, Espen Beer; Revenga, Ana L.; Sangraula, Prem; Serajuddin, Umar; Yoshida, Nobuo. 2015. *A global count of the extreme poor in 2012 : data issues, methodology and initial results* (English). Policy Research working paper; no. WPS 7432. Washington, D.C. : World Bank Group.